

REMARKS

Applicant wishes to thank the Examiner for reviewing the present application.

Regarding the IDS submitted by Applicant, there is no requirement in MPEP 609.05(b) to point out particular references which are believed to be of particular relevance. In any event, Applicant advises that the large number of references is a result of large number of references in related classifications. The references cited in the IDS are those identified either in searches conducted prior to filing or cited in corresponding applications.

Claim Amendments

Claim 1 is amended primarily to improve readability by reformatting into a sub-paragraph format and to improve grammar. No new subject matter is believed to have been added by way of these amendments.

Claim Rejections – 35 U.S.C 103

Claims 1, 2, 5-11 and 13-18 have been rejected under 35 U.S.C 103(a) as being unpatentable over Hein (US 3,834,836) in view of Kita (US 3,498,227). Applicant respectfully traverses the rejections as follows.

Claim 1 is directed to a hydraulic machine having a plurality of pistons which slide within cylinders in a barrel of a rotary group. A swash plate engages the pistons to induce reciprocation and a port plate is interposed between the barrel and the housing. The port plate connects respective cylinders alternatively with an inlet port and an outlet port. The port plate is biased into engagement with a sealing face on either the barrel or the housing and connects to the other by an annular sleeve extending between the port plate and the other of the barrel and the housing. As the barrel rotates relative to the housing, the sealing faces are maintained in contact by the bias, and misalignment is accommodated by movement of the annular sleeve. The arrangement of the port plate, cylinder and annular sleeve is shown in Figure 9 of the present application. This arrangement accommodates movement to maintain a seal and thus compensates for such misalignment (e.g. see paragraph [0073], page 13).

Hein teaches an override control for a variable displacement pump. A rotating barrel (33) includes a number of cylinders (34) with reciprocating pistons (36) that are acted upon by a

tiltable swashplate (38). However, there is no port plate shown or any detail of such a port plate discussed in Hein. At most, Hein shows a rotating barrel.

Accordingly, not only does Hein not teach a port plate interposed between a barrel and a housing (as acknowledged), Hein does not even disclose the existence of a port plate.

The Examiner cites Kita as teaching a port plate (22) that is interposed between a barrel (27) and a housing (11a). Applicant believes that the Examiner has misconstrued the structure shown in Kita. In particular, Kita does not even teach a rotating barrel but rather teaches a fixed barrel with a rotating shaft and swash plate. Fluid enters an inlet at (47) and exits an outlet at (14), after passing through a series of check valves (56). The disk (22) is actually fixed to the shaft and provides a surface for sleeves (41) to bear against. As such, Kita discloses an entirely different type of machine, in fact, Kita does not even utilize a rotating barrel.

Claim 1 requires a port plate that, *inter alia*, connects respective ones of the cylinders alternatively with an inlet port and an outlet port. Hein does not disclose any detail regarding a port plate, and the plate (22) in Kita does not alternatively connect respective cylinders with an inlet and an outlet. For at least this reason, the combination of Hein and Kita fails to teach every element in the claim.

Claim 1 also requires a sealing face between the port plate one of the barrel and housing and annular sleeves between the plate and the other of the barrel and housing. In Kita the sealing face is between the sleeves (41) and the plate (22). There is no structure to provide the annular sleeves between the housing and plate as required by claim 1. Hein cannot provide such structure as he is silent on the construction of the port plate. Accordingly, Hein and Kita fail to teach each and every element of claim 1.

Moreover, there would be no motivation to combine the references as they would not operate as recited in the claims if combined. In particular, Hein is meant to operate with a rotating barrel while Kita has a fixed barrel. At most, incorporating Kita into Hein would merely provide a series of check valves in an annulus around the barrel. This would then require collection of the pressurized fluid and Hein does not even suggest how such a modification could be achieved and is lacking in detail of how a port plate would operate, let alone according to the principles taught in Kita.

Therefore, neither Hein nor Kita alone or in combination teach or suggest the port plate as recited in claim 1 and there is no motivation to combine the references as they teach entirely

different types of machines. As such, claim 1 is believed to be patentably distinguished over Hein in view of Kita. Claims 2, 5-11 and 13-18 being ultimately dependent on claim 1 are also believed to be distinguished.

Claims 3 and 4 have been rejected under 35 U.S.C 103(a) as being unpatentable over Hein in view of Kita, in further view of Takenaka (US 6,517,321). Applicant respectfully traverses the rejections as follows.

Claims 3 and 4 are dependent on claim 1 and Applicant is believed to have shown above that claim 1 is patentably distinguished over Hein in view of Kita. As such, Takenaka must at least teach what is missing from Hein and Kita. Although Takenaka teaches of a conical spring (65), Takenaka clearly does not teach the arrangement of a port plate interposed between a barrel and housing and effective to connect respective cylinders alternatively to an inlet port and an outlet port. For at least that reason, claims 3 and 4 are believed to be patentably distinguished over Hein in view of Kita in further view of Takenaka.

Claims 19-24 have been rejected under 35 U.S.C 103(a) as being unpatentable over Hein in view of Kita, in further view of Kimura (US 5,749,710). Applicant respectfully traverses the rejections as follows.

Claims 19-24 are dependent on claim 1 and Applicant is believed to have shown above that claim 1 is patentably distinguished over Hein in view of Kita. As such, Kimura must at least teach what is missing from Hein and Kita. Although Kimura teaches of a trunnion pin (12a) and mentions a control circuit, Kimura clearly does not teach the arrangement of a port plate interposed between a barrel and housing and effective to connect respective cylinders alternatively to an inlet port and an outlet port. For at least that reason, claims 19-24 are believed to be patentably distinguished over Hein in view of Kita in further view of Kimura.

Claim 12 has been rejected under 35 U.S.C 103(a) as being unpatentable over Hein in view of Kita, in further view of Budzich (US 5,205,124). Applicant respectfully traverses the rejections as follows.

Claim 12 is dependent on claim 1 and Applicant is believed to have shown above that claim 1 is patentably distinguished over Hein in view of Kita. As such, Budzich must at least teach what is missing from Hein and Kita. Although Budzich teaches of a hydrodynamic bearing (65), Budzich clearly does not teach the arrangement of a port plate interposed between a barrel and housing and effective to connect respective cylinders alternatively to an inlet port and an

outlet port. For at least that reason, claim 12 is believed to be patentably distinguished over Hein in view of Kita in further view of Budzich.

In view of the foregoing, Applicant believes that claims 1-24 clearly and patentably distinguish over the references cited by the Examiner and are in condition for allowance.

Applicant requests early reconsideration and allowance of the present application.

Respectfully submitted,



April 25, 2007

Mr. Wesley W. Whitmyer, Jr. (Registration No. 33,558)
Attorney for Applicant

St. Onge Steward Johnston & Reens LLC
986 Bedford Street
Stamford, CT 06905-5619
U.S.A.